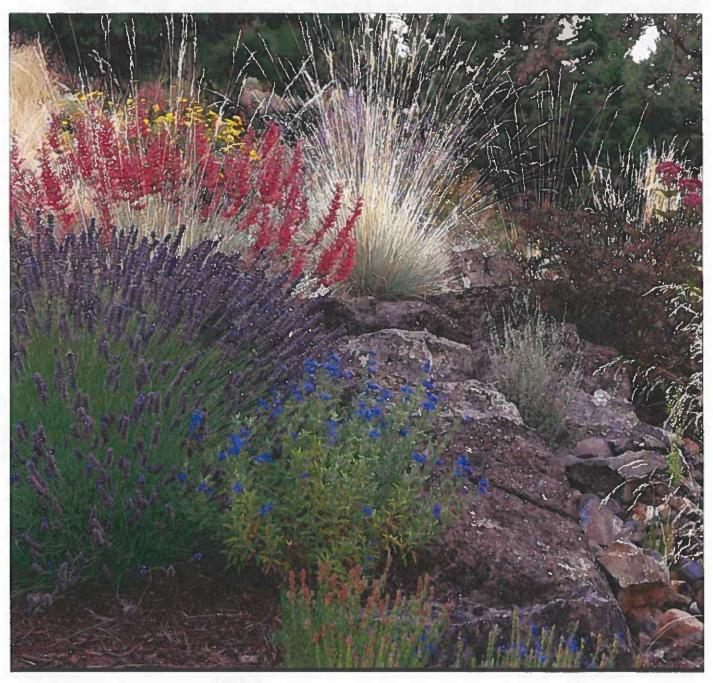
WATER-WISE GARDENING

IN CENTRAL OREGON

Amy Jo Detweiler







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MORE ONLINE!

Search for water-wise plants by attributes, height, spread and more at https://catalog.extension.edu/em9136.

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entral Oregon is one of the most beautiful regions in the western United States. It is also one of the fastest-growing areas in the country.

As we continue to see a consistent pattern of drought in the western United States, we need to balance what our home and commercial landscapes can and should look like with a focus on water conservation and water quality. Landscapes add value, beauty, and livability to our homes and communities, and keeping them water-wise is a critical part of being a good steward in our region.

With only 3 to 6 inches of natural precipitation during the growing season (April through October), water use for our landscapes is a very important consideration. Each year, a typical Central Oregon resident uses over 50 percent of his or her total water consumption for outdoor landscape.

Because we all share water resources, we each have a responsibility to use it wisely.

Whether you are an experienced gardener or a newcomer to the high desert, learning how to successfully garden can be an exciting challenge. Most gardeners value the natural beauty of our native landscapes but want to enhance them with plants that add color and texture. Can you create a more beautiful, high-desert landscape that is water efficient and sustainable? The answer is yes, if you use water-wise gardening practices.

Water-wise gardening (also known as xeriscaping) combines innovative conservation techniques with sound horticultural practices. Not only is it possible to have a colorful and beautiful landscape while conserving water, you can also save time, energy, and money.

A water-wise landscape may conjure up images of a dry, desert-like "blandscape." But, in fact, a well-planned, water-wise landscape can be attractive, colorful, and rewarding. A water-wise garden does not mean limiting your plant selection to only native plants or plants that use low amounts of water; it can incorporate hundreds of plant choices, including trees, shrubs, evergreens, perennials, and grasses (Figure 1).

At the heart of water-wise gardening are efficient irrigation practices and grouping plants together with the same water requirements (also called hydrozoning). Water-wise gardening emphasizes proper plant selection and conserving natural resources. In this guide we describe the steps needed for creating a successful water-wise garden and provide an in-depth look at the plants best suited for high-desert gardening.

Seven steps of water-wise gardening

There are seven steps to water-wise gardening, including garden concepts you likely have heard before. However, the key to a successful water-wise garden is incorporating all seven steps with careful consideration. Eliminating any one of the steps reduces your chance of conserving water and producing a healthy, thriving landscape.

► Step 1: Planning and design

Let the fun begin! Careful planning will result in a beautiful landscape for many years. When you start planning, consider your landscape needs and activities. How do you want to use your landscape? How much time do want to spend maintaining your landscape? How does water naturally flow across your site?

You can design the area yourself or enlist the help of a landscape professional. For additional resources, contact your local Extension service, nurseries, library, and bookstores, or check out the latest landscape design software. When starting to design, consider things such as: water source availability, slopes, amount of sunlight, soil type, views, microclimates, and pertinent local and state requirements on Oregon Drainage Law (see Central Oregon Stormwater Manual at https://newcoic.files.wordpress.com/2012/09/2010rev-chapter-0-cover_toc_forward.pdf).

Begin by creating a list of ideas you would like to see in your landscape, including hardscaping such as patios,



Figure 1. A water-wise garden can include a wide variety of plant species.

boulders, and arbors. If you like the idea of a water feature, consider placing a birdbath or recirculating fountain to add that extra water element without greatly increasing

Water-smart site design, together with efficient irrigation, is the basis of a successful water-wise garden. You will save water, time, and money with a well-planned site layout that takes advantage of using stormwater runoff in combination with a well-planned, supplemental irrigation system.

Stormwater management

With the rain-shadow effect of the Cascade Mountains, Central Oregon receives far less rain than Western Oregon and has less overall annual precipitation. According to Oregon Drainage Laws, water may only come off a developed site in an amount and manner it would under natural conditions. This law encourages landscape design that preserves and uses water to supplement your landscape while reducing your irrigation needs and costs.

Consider how water runoff moves across your site. Try to work with that natural flow as much as possible, and use it as a design element. Redirect water with berms and dry creek beds (Figure 2). If not well planned, intensive runoff flows, especially when combined with hardscape or impervious surfaces and slopes, can pick up debris and cause erosion that are problematic to a landscape and site features.

Water cannot sink through impervious surfaces such as typical roofs, driveways, or patios; instead it will collect and run off. The greater the water runoff, the more quickly it will travel across a smooth hard surface rather than through vegetation that would take some of the force off of the rain drops. So, carefully consider the materials that you use for your landscape and gardening designpermeable pavers, porous asphalt, and wood decks all allow water to soak into the soil and help reduce runoff.

Design your site to manage stormwater in a way that benefits your water-wise garden and overall landscape concept. Consider catchments for water coming off impervious surfaces—for example, roof downspouts or rain chains leading to cisterns or barrels (Figure 3, page 3) that collect water that can be used later for irrigation.

For runoff not collected for later use, provide opportunities for water to sink into (infiltrate) the landscape. On the garden scale, simple stormwater infiltration systems can be integrated into the landscape plan in an aesthetic, recreational, and protective manner. For instance:

· A rain chain can feed a slightly concave, landscaped area that serves as a temporary detention basin, allowing runoff to slow down and supplement landscape vegetation.









Chris Hart-Hendersor

Figure 2. Some ways to manage stormwater include permeable patio surfaces (A), bioswales (B), and the use of dry creek beds (C).

- Permeable pathways can meander along a landscaped area to appear like a creek bed, creating an attractive multipurpose garden form (Figure 2).
- · A sandy area used for a children's play area can serve as a shallow infiltration spot on the few days of rain events.
- Slot drains that direct driveway water to landscaping rather than into a garage or the street can protect structures and natural features.

By slowing down runoff and allowing it time to soak into the ground, stormwater brings more water to the plants and garden features that depend on water to thrive. For a step-by-step guide to incorporating a rain garden into your landscape, see Harvesting Rainwater for Use in the Garden and The Oregon Rain Garden Guide (in Resources, page 51). Consult the list of plants in this guide that are specific to Central Oregon stormwater management.

► Step 2: Efficient irrigation

Once you understand and plan for how natural precipitation will play a role in your water-wise garden, the next step is to plan how to provide additional irrigation, if needed. If carefully managed, both manual and automatic irrigation can be efficient. Ensure that all irrigation stays on the intended target and does not result in overspray or runoff onto adjacent streets, sidewalks, or other hard surfaces.

Automatic irrigation

Generally, automatic irrigation is more time efficient and can save water if properly designed, installed, and maintained. The goal is to design the irrigation system so that plants are only receiving the water they need, with little to no excess. The irrigation should penetrate the soil and saturate the root zone without resulting in runoff or overwatering.

For manual irrigation, use a sprinkler attachment that best fits the shape of your yard. Avoid using sprinklers that throw water high into the air. This results in losing water to the wind and evaporation, and means you will have to run your sprinkler longer to get enough water into the soil. Sprinkler systems that emit water closer to the ground

and the plants' root system are more efficient.

If you are installing a new landscape, lay out your automatic irrigation system at the same time. Separate your turfgrass watering zones from other watering zones (hydrozones). There are four hydrozones—very low, low, moderate, and high. Plants are designated to a hydrozone based on their watering needs. Examples of plants placed in each hydrozone are listed in Table 1 (page 4).

The best types of irrigation for turfgrass areas include low-pressure, low-precipitation-rate sprinklers that provide uniform and head-to-head coverage. For trees, shrubs, and perennials, use microsprays, drip emitters, or pop-up irrigation (Figure 4, page 4). Avoid the "set-it-and-forget-it" syndrome; adjust your automatic system throughout the season based on the plants' water needs (e.g., less water in the spring and fall).

Be sure to maintain and repair your irrigation system throughout the growing season so that it remains efficient. Regularly inspect it for leaks, including inside any valve boxes. When making repairs, be sure to utilize irrigation sprinkler nozzles, valves, and other components that are consistent with your current system.

Irrigation controllers

Irrigation controllers have evolved over the years to include a variety of different technologies that can help you irrigate more efficiently. Smart-irrigation controllers automatically adjust irrigation schedules based on environmental conditions throughout the growing season.

These controllers utilize onsite sensors that detect conditions like rain, wind, and heat. They are often referred to as sensor-based, smart-irrigation controllers since they receive information from one or more onsite devices.



Figure 3. Rain chains are practical tools to help manage stormwater runoff by diverting water to where it will benefit the garden (A) or collecting it in cisterns or barrels so that it can be used later for irrigation (B).

Table 1. Hydrozone descriptions

Hydrozone	Supplemental water requirements	Plant type
Very low	Required for plant establishment	Most natives
Low	Some required during the growing season	Perennials and some shrubs
Moderate	Regular amounts required during the growing season	Fruit trees, ornamental trees, and shrubs
High	Regular amounts required during the growing season	Turfgrass and vegetable gardens

Other smart-irrigation controllers receive a Wi-Fi, radio, cellular, or satellite signal with environmental information that the controller interprets to adjust irrigation. These are often referred to as signal-based, smart-irrigation controllers since they depend on an external signal from somewhere other than the landscape.

Irrigation-controller technology will continue to advance and, like many other electronic home devices, become increasingly affordable and accessible through smartphones, tablets, and computers. However, no irrigation controller can compensate for a system that is poorly designed, installed, or maintained. Make sure your system is performing well and has no leaks before considering upgrades.

Deciding whether a smart-irrigation controller is right for you can depend on several factors. Are you good about adjusting your irrigation controller schedule every couple of weeks? If so, you may already be making enough "smart" adjustments. However, if you're not regularly adjusting your irrigation schedule or leave for extended periods of time, a smart-irrigation device might be a great way to reduce the amount of water you use for irrigation. Before investing in this type of system, you should also consider the installation and maintenance required by a high-tech controller. Onsite sensors require maintenance (e.g., you may need to occasionally clean debris away from a rain sensor or replace a solar radiation sensor after several years). Signal-based, smart-irrigation controllers typically avoid most sensor-maintenance costs but often come with a subscription fee or require your home's Wi-Fi data connection. The Environmental Protection Agency (EPA) WaterSense-labeled, smart-irrigation controllers are third-party certified to ensure that they meet the Water-Sense criteria for efficiency and performance. For more information or a list of WaterSense-labeled products, visit www.epa.gov/watersense.

How and when to water your plants

When watering your perennials, trees, and shrubs, consider deep watering every three to four days, as opposed to frequent shallow watering, to encourage the development



Figure 4. For trees, shrubs, and perennials, use a dripline (A), pop-up irrigation (B), or microsprays.

of deep-rooted and more drought-tolerant plants. This is especially important during periods of drought. Ideally, you are saturating the soil 10 or more inches down in depth and watering the feeder roots of the plants. These are the roots that move horizontally through the soil profile and follow the dripline (the outermost circumference of a tree or shrub canopy where water drips onto the ground) of the plant out. Adjust your irrigation as your plants mature to make sure you are watering the feeder roots.

In Central Oregon, it is best to water in the early morning, when there is less wind and when any excess water on the plant will potentially dry off throughout the day. Take time to ensure that your irrigation is getting to the roots of plants by doing a soil moisture test prior to irrigating on a given day. Taking a hand trowel, dig down 8 to 10 or more inches in the dripline area of the plant and remove the soil. If the soil is dry and crumbly, then you may want to increase the time or output of your irrigation. If the soil is soggy and wet, then you can reduce the time or output (e.g., watering fewer days). If the soil is moist enough to stay in a ball in the palm of your hand, then you are probably watering sufficiently. Watering for turfgrass is different than watering for landscape plants; see the turfgrass section Step 4 (page 6).

In times of extreme drought, prioritize your watering needs by watering trees first. Not only are they the most costly to replace, but they also provide significant environmental, social, and economic benefits. Their canopies may provide shade for your home and habitat for wildlife. Lawns, perennials, and shrubs are easier to replace, if necessary.

► Step 3: Soil

Knowing what kind of soil you have and how to improve it is critical for a successful water-wise garden. Healthy soil provides a nutrient-rich planting area, improves water holding capacity and aeration, and addresses drainage concerns. Water moves through soil differently depending on



its texture. In gardening, there are essentially three types of soil: sand, loam, and clay. Each of these three soil types absorbs or takes in water in a different way (Figure 5):

- Sandy soil types—Water moves quickly and goes straight down through the soil.
- Loamy soil types—Water intake spreads down and out in the soil, which is ideal for plant roots to absorb water.
- Clay soil types—Water penetrates slowly and spreads out horizontally in the soil profile.

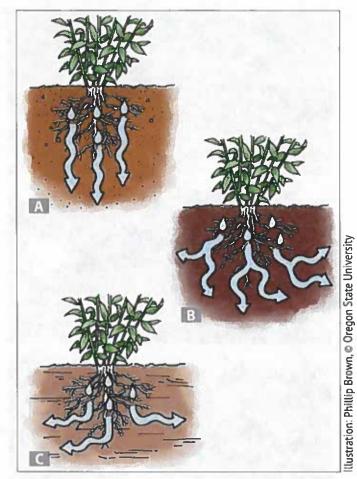
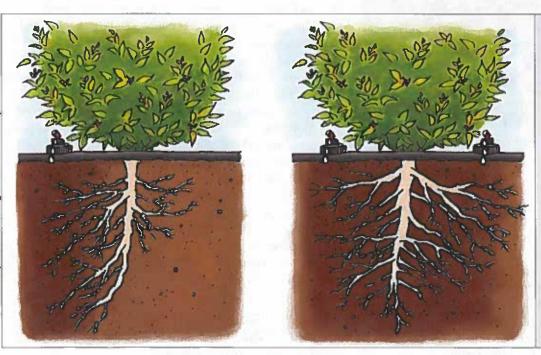


Figure 5. Sandy (A), loamy (B), and clay (C) soil types store and disperse water in different ways.



The goal in irrigating your plants is even, consistent moisture covering the entire root zone. When water penetrates evenly into the soil profile, it encourages deep rooting, which results in more drought-tolerant plants. The drawing on the left shows inadequate irrigation coverage, resulting in a smaller less productive root mass. The drawing on the right shows adequate coverage and a more healthy and extensive root system.

Ilustration: Phillip Brown, © Oregon State University









Figure 6. Turf-type tall fescue (A) is a good choice for Central Oregon lawns. Clump fescues, either native or ornamental, can be substituted for traditional lawns (B). Woolly thyme (C and D) or the use of a dry river bed and plants (D) are additional alternatives to turf grass.

Determine what kind of soil you have in your yard and amend it accordingly. In Central Oregon, the soil is typically sandy and sterile with lots of rock. Water tends to drain right through the soil if left unamended. Regardless of soil type, the general rule of thumb is to amend your native soil with one-third organic matter, such as finished (fine-textured and well broken down) compost or wellaged manure that is free of herbicide residue.

The primary reason to amend your planting area in Central Oregon is to improve the condition of the soil, which will help with the initial root establishment of your plants. By creating an ideal soil environment for the root system of your plants you can potentially increase the plants' ability to become more drought-tolerant. When preparing a new area for non-native plants or turfgrass, till 1 to 2 inches of organic matter into the native soil to a depth of 6 or more inches (3 cubic yards per 1,000 square feet). Mix the native soil with an amendment and backfill the area. Your soil is now ready to plant with beautiful water-wise plants. Since native plants are adapted to native soils, they generally do not require additional soil amendments when planting.

► Step 4: Turfgrass and turfgrass alternatives

Yes, you can have turfgrass in your water-wise garden! How much and what kind you use, and site preparation and maintenance will determine whether turfgrass is an efficient use of water.

Use turfgrass only where you need it, such as high-use or play areas. Use turfgrass on large, relatively flat areas, and not along narrow paths, in median strips, along foundations, or on steep slopes. The benefits of using turfgrass include its ability to reduce soil erosion, noise, ground surface temperatures, and glare. It is also one of the best plants for creating a defensible space around your home when designing a fire-wise landscape. Additionally, turfgrasses, when properly maintained, can reduce runoff and help increase water infiltration into the soil profile.

Warm-season grasses (e.g., buffalograss, zoysiagrass, and Bermudagrass) have better drought resistance than cool-season grasses (e.g., turf-type tall fescue, Kentucky bluegrass, and perennial ryegrass). However, in Central Oregon, the warm-season grasses do not readily establish because air and soil temperatures are too cold during the growing season. For this reason, cool-season grasses, which are more adaptable, are commonly used instead. These grasses green up more quickly in spring but go dormant more quickly under drought-like conditions, thus requiring supplemental irrigation. Of the cool-season grasses, turf-type tall fescue is more drought tolerant than fine fescue, perennial ryegrass, and Kentucky bluegrass, alone or in combination (Figure 6A).

Site preparation and irrigation design should be carefully considered to effectively reduce water use in lawns. Whether using grass seed or laying sod, the site should be sufficiently amended and prepared to allow for good root establishment. Take care not to compact the soil. For more information see *Practical Lawn Establishment and Renovation* (http://extension.oregonstate.edu/deschutes/sites/default/files/ec1550.pdf) and *Efficient Irrigation in the Intermountain West* (see Resources, page 51).









Figure 7. Reduce compaction and thatch by aerating (A) followed by an application of fine compost using a compost roller (B). Adding an even, quarter inch of compost to the lawn (C) will result in a healthy stand of turfgrass (D).

Water requirements for turfgrass are different than those for other plantings. When watering turfgrass, you will likely be watering to a depth of 6 to 8 inches. Avoid overwatering and irrigation cycles that result in runoff. Short run times that are too short may result in shallow-rooted stands of turfgrass that will not be as drought tolerant. The most common types of turfgrass used in Central Oregon require anywhere from 1½ to 2 inches

of water per week (which can be applied incrementally throughout the week) during the warmest months of the growing season.

There is a direct correlation between mowing height and root depth in stands of turfgrass. The taller the grass, the deeper the root system. Be sure to consider the proper mowing height for the type of grass you have to encourage deep, more drought-tolerant roots.

One of the challenges in maintaining a more drought-tolerant stand of turfgrass is the buildup of thatch. Thatch is the combination of dead stems, roots, and some leaf tissue (not including lawn clippings). It builds up more quickly in Central Oregon as compared to other places because of the sterile native soils that lack the soil microorganisms that typically break down thatch. As a thatch layer builds, it becomes more difficult for water to move through it. Because turfgrass roots are below the thatch layer, you may need to water longer to sufficiently water your lawn.

One of the better ways to maintain a normal, quarterinch layer of thatch is to routinely core aerate the lawn and then add a thin layer of fine, finished compost using a compost roller. This will provide beneficial nutrients and microorganisms to the soil (Figure 7). Additionally, it is recommended to use a mechanical dethatcher every 2 to 3 years, in the spring or fall, to remove some of the thatch layer.

Research suggests that a small planting of trees that partially shade irrigated urban lawns may help save water in semi-arid irrigated environments. Different types of grass require different amounts of water, so adjust your irrigation schedule accordingly. If you already have an existing lawn, consider reducing areas that are not needed and replacing them with permeable pavers or plants that require less water. Alternatives to turfgrass include wildflower areas or low-growing perennials (Figures 6C and 6D, page 6).

► Step 5: Plant selection

Most people choose plants based on their flower color, light requirements (sun or shade), fragrance, or overall appearance. While these are all valid reasons to select plants, you should also consider a plant's water use and its adaptability in the landscape. Group plants with similar water, soil, and sunlight requirements into the same hydrozones (Figure 8, page 8).

When choosing a plant for your yard, consider its native environment. Then ask yourself, "Is this an environment I can easily mimic in my own yard?" If it will take a lot of resources and time to keep that plant alive, it is probably not a good choice. Consider choosing plants that naturally grow together (natural plant associations) or those that require the same type of care (cultivation) or

both. Research suggests that native plants are not necessarily more water efficient or more drought tolerant than non-native plants when planted in a well-irrigated land-scape. However, native plants have value beyond water use; they support natural ecosystems by providing food and habitat for native pollinators and wildlife.

Ideally, it is best to select plants that can survive with existing or minimal supplemental resources. When choosing non-native plants, make sure they are non-invasive. Invasive plants can potentially displace native plants, causing both environmental and economic damage.

The mature size of plants is another important factor to consider. This is especially important when selecting trees and shrubs. Be sure to allow enough space for a plant to fill in without having to severely prune it or move it as it matures.

In Central Oregon, consider plants that are more commonly grown in the Intermountain West instead of the Pacific Northwest. Choose plants that are adaptable to your area and right for your USDA hardiness zone. According the USDA hardiness zone map, Central Oregon is placed in the USDA Hardiness Zone 6, meaning plants are able to withstand temperatures from 0°F to 10°F during the winter months. This placement, however, is oversimplified given the region's many microclimates; instead, select plants placed in the USDA Hardiness Zone 3–5.





Figure 8. Group plants with similar water, soil, and sunlight requirements.

When it comes time to plant, remember to

Call Before You Dig (by dialing 811) so that you can have
someone come out and locate any existing utility services.

Finally, keep in mind that increasing plant diversity in the landscape will increase the diversity of native, beneficial insects and wildlife, which helps minimize plant damage from insects and disease. Consider including plants with different functions (e.g., plants that have edible fruit, are fire- or deer-resistant, provide fall color, aid in stormwater management, and attract native pollinators and beneficial insects) to increase the diversity of the landscape.

Step 6: Mulching

The next step requires using mulch as a top dressing for all of your trees, shrubs, and flowers (Figure 9). Mulch helps reduce weeds, minimize evaporation (water loss from the soil), cool the soil, and prevent soil erosion. What kind of mulch is the best to use? Mulches are available in many shapes, sizes, and colors, including bark chips, post peelings, compost, and rock. There are pros and cons to all mulches. For example, wood bark mulch returns some nutrient components to the soil over time as it breaks down, whereas rock mulch may stay in place better than fine or small bark mulches in windy sites.

The ideal application for a mulch layer is between 2 and 4 inches on top of the soil. You can do a 1- to 2-inch layer of nutrient-rich compost (e.g., fine textured and well broken down yard debris) with a 1- to 2-inch layer of wood bark chips on top. Some people use compost alone; however, because compost (as opposed to wood chips) is a good growing environment for seeds, you will potentially end up with a crop of weeds that will compete with your plants for water and nutrients. Whatever mulch type you choose, do not apply it in excess of 4 inches or you risk



Figure 9. An application of western juniper wood bark mulch minimizes water loss from the soil.

cutting off the oxygen supply to the plants' root system, which can result in root death. Allow for some of the plant debris that falls off the trees, such as needles and leaves, to remain on the ground and provide a natural mulch or compost layer in your landscape beds. Periodically reapply mulch as needed and rake the surface of the soil to eliminate any compaction that occurs. Also consider using a high-quality landscape fabric covered with mulch in your beds to suppress weeds and minimize evaporation (which reduces how often you have to water). High-quality landscape fabric should be strong (polywoven, not stretchy) and breathable, and allow water to flow through it.

Step 7: Maintaining your water-wise garden

All gardens, including water-wise ones, need routine, seasonal maintenance to preserve the beauty and health of your landscape. Maintenance includes pruning, mowing, watering, weeding, fertilization, and regular monitoring for insect or disease damage. In general, water-wise gardens require less maintenance than traditional landscapes, especially as the landscape matures. A healthy, maintained landscape is also more resistant to drought, heat, freezing, disease, and insects.

Irrigation system maintenance

Many people use water-wise principles to save water but fail to maintain their irrigation system and end up using more water. Improperly maintained irrigation systems can waste 50 percent or more of water. Sprinkler heads can break or become misadjusted. Drip systems can clog, get cut, or moved. Plants and turfgrass can grow over irrigation heads and prevent systems from working as originally designed. Winters in Central Oregon can also take their toll on irrigation systems. Proper spring tune-ups and winterization are vital for keeping your irrigation system operating as efficiently as possible.

Pruning

Pruning is often done to shape and rejuvenate plants, eliminate future problems, and address safety issues (Figure 10). In general, pruning is done in early spring on deciduous trees, ornamental grasses, and perennials. Prune conifers in late fall or winter to avoid attracting the sequoia pitch moth (not in flight in the winter) to fresh pruning cuts.

Mowing

Make sure you mow at the right height for your type of turfgrass; do not overwater or overfertilize your turfgrass area. Turf-type tall fescues, Kentucky bluegrass, perennial ryegrass, and fine fescues can all be mowed at a height between 2 and 3 inches.



Figure 10. Pruning lopers

Watering

Winter watering is critical in a high-desert environment, where plant materials tend to dry out through the winter months. Be sure to water your new plantings every 6 to 8 weeks when the ground is warm enough to absorb water. This is particularly important during a dry winter with minimal precipitation.

Weeding

Eliminate weeds to prevent them from competing with your landscape plants for water and nutrients (Figure 11). Prevent weeds from going to seed.

Fertilization

Trees, shrubs, and perennials can be fertilized once during the growing season in spring or early summer with a slow-release fertilizer. Avoid fertilizing in the late summer or early fall. Turfgrass can be fertilized more often (refer to *Turfgrass Maintenance Calendar for Eastern Oregon* in Resources, page 51). Avoid applying fertilizer or other garden chemicals before a rain or on a windy day. Sweep up and properly dispose of any excess; properly store garden chemicals under roofs. These steps will help protect our natural surface and drinking waters.

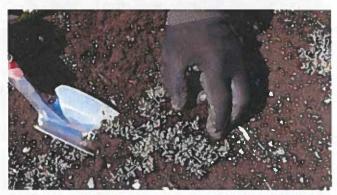


Figure 11. Eliminate weeds that compete with your landscape plants.

Retrofitting your existing landscape

If you already have a developed landscape there are several ways to adapt it to a water-wise garden. You can start by adjusting or upgrading your sprinkler system to a more efficient one. Also, take note of your irrigation schedule and adjust it according to weather conditions. You can continue to add plants that require low amounts of water to your landscape. You can also reduce the turfgrass areas that you do not use, converting them with permeable pavers or planting beds (Figure 12).





Photo: Gerry Kiffe





Figure 12. Before (A and C) and after (B and D) photos of two residences demonstrate ways to retrofit a landscape into a water-wise garden.

Key for symbols

Each plant description will include one or more symbols to assist you in selecting the best plants for your landscape. Each symbol is defined below and designates adaptability, plant use, and other notes of interest for that plant.

This guide was written <u>specifically</u> for Central Oregon (Crook, Deschutes, and Jefferson counties). To the best of our knowledge, the plants listed in this guide have not been found to be invasive in Central Oregon.



Performs well in dry sites (very low water use)



Prefers supplemental irrigation (low water use)



Prefers a consistently moist location (moderate water use)



Prefers full sun (6 or more hours)



Prefers full sun to partial shade Morning sun is best



Prefers full shade (6 or more hours)



For use in rain gardens or stormwater management (area should drain within 48 hours)



Attracts butterflies



Attracts birds



Attracts pollinators



Deer-resistant; seldom damaged by deer, not deer-proof



Fire-resistant



Native varieties available

Ornamental trees

Ornamental trees are usually smaller than shade trees and add variety to the landscape. These trees can provide showy flowers, decorative fruit, attractive fall color, and winter texture. A great choice for smaller areas and single specimen trees.

Aspen, Quaking Populus tremuloides





Attractive, light-colored bark and trembling green leaves make this a popular tree. These trees will sucker and produce groves near where they are planted. Suckers will come up in beds and turfgrass, so plan accordingly. Yellow-orange fall color. Adaptable to both wet and dry soils. Susceptible to many diseases and insects in an urban environment. Cultivars include 'Erecta', which has an upright, columnar growth habit and orange-yellow fall color.

Height: 30–40' Spread: 12–15' Hardiness Zone: 1–8



Beech, EuropeanFagus sylvatica

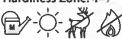


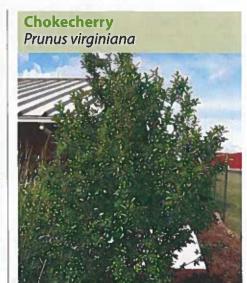
This slow-growing tree has unique gray bark that develops over time. It also has dark, glossy, green, purple, or tricolor



leaves. Generally, the smaller or weeping forms are used as accent plants in the landscape. Cultivars include 'Asplenifolia,' 'Purple Fountain', 'Riversii', 'Tricolor', and many others. Height will vary depending on cultivar.

Height: 10-60' Spread: 12-35' Hardiness Zone: 4-7





A native, mediumsize tree to large shrub with green leaves. White flowers followed by edible purple fruit that can be used for jams, jellies, and wines.



Will produce some suckers.

Height: 20-30' Spread: 18-25'

Hardiness: Zone 2-6



Chokecherry, Amur Prunus maackii





Attractive, shiny, coppery-red peeling bark. Clusters of white flowers followed by purplish-red fruit. Yellow fall color.

Height: 10-25' Spread: 18-20'

Hardiness Zone: 3-7



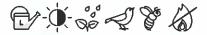
Chokecherry, Canada Red Prunus virginiana 'Schubert'



Green leaves emerge, changing to dark red. Fragrant white flowers in spring followed by purplish-red fruit that can be used for jams, jellies, and wines. Also sold as a large shrub.



Height: 20-30' Spread: 15-20' Hardiness Zone: 3-8



In times of extreme drought,
prioritize your watering needs by
watering trees first.

Crabapple, Flowering Malus hybrids



'Spring Snow'





'Royal Raindrops'

Many varieties to choose from; these trees have beautiful spring flowers in many colors including rose, pink, red, and whites. Green or purplish foliage. They also provide ornamental fruit, fall color; some are fruitless. Some varieties include 'Brandywine', 'Cardinal', 'Centurion', 'Dolgo', 'Prairifire', 'Profusion', 'Royal Raindrops', 'Red Jade', 'Red Jewel', 'Sargent', 'Snowdrift', 'Spring Snow', and 'Zumi Calocarpa'.

Height: 15-20' Spread: 15-20' Hardiness Zone: 4-8



Eastern RedbudCercis canadensis





followed by heartshaped green leaves in summer. Interesting brown, pod-like fruit that may persist into winter. Yellow fall color. Varieties include 'Lavender Twist', 'Covey', 'Forest Pansy', and 'The Rising Sun'.

flowers in spring

Height: 20-30' Spread: 15-20' Hardiness Zone: 4-9



Goldenrain Tree Koelreuteria paniculata







Beautiful yellow flowers in summer followed by Chinese lantern-like pods that persist into winter. Underused in Central Oregon. Can be susceptible to winter breakage and dieback.

Height: 20-30' Spread: 15-20' Hardiness Zone: 5-9



Hawthorn Crataegus species



Small- to mediumsized trees or shrub with spring white or red flowers



followed by ornamental red to orange fruit. Most have thorns; some varieties are thornier than others. More popular varieties include Russian, Thornless Cockspur, English Hawthorn, 'Crimson Cloud', 'Paul's Scarlet', Washington Hawthorn, and Green Hawthorn 'Winter King'. Not invasive in Central Oregon.

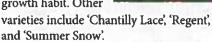
Height: 15-20' Spread: 15-20' Hardiness Zone: 5-8



Lilac, Japanese Tree 'Ivory Silk'Syringa reticulata 'Ivory Silk'



Bears fragrant, creamy-white flowers in early summer. This variety has a compact, oval growth habit. Other



Height: 15-20' Spread: 10-12' Hardiness Zone: 4-7



Maple, Amur Acer ginnala



Small tree or large shrub with irregular shape and excellent red fall color. Good choice



for a small area, can be used to create a hedge. Other varieties include 'Beethoven', 'Flame', 'Red November' and 'Mozart'.

Height: 15-20' Spread: 15-20' Hardiness Zone: 2-8



Maple, Rocky Mountain Acer glabrum





Small tree or large shrub with attractive dark green foliage and red twigs. The "helicopter" seeds will turn reddish in summer. Attractive red fall color. Several subspecies and

varieties available. Does best in morning sun with afternoon shade.

Height: 20-30' Spread: 15-20' Hardiness Zone: 4-8



MORE ONLINE!

Search for water-wise

plants by attributes,

height, spread and

more at https://catalog.

extension.edu/em9136.

Mountain Ash Sorbus aucuparia



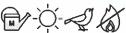
An attractive tree with an upright, oval growth habit. Displays showy white flowers in spring followed by orange-red fruit that persists. Finetextured, dark green leaves turn red, yellow,



or purple in fall. Several varieties available. Keep healthy as it is susceptible to several insects and disease. Not invasive in Central Oregon.

Height: 20-30' Spread: 15-20'

Hardiness Zone: 3–7



Weeping Mulberry Morus alba 'Chaparral'



Pear, Callery Pyrus calleryana cvs.



'Chanticleer





Chanticleer'

Chanticleer

An ornamental pear with dark, glossy, green foliage. White flowers in spring followed by a small pea-sized green fruit. Can be multi-stemmed. Red, burgundy to orange fall color, depending on variety. Cultivars include 'Aristocrat', 'Autumn Blaze', 'Capital', 'Chanticleer', 'New Bradford', and 'Jack'. Not invasive in Central Oregon.

Height: 20-30' Spread: 15-20'

Hardiness Zone: 4-9



Serviceberry or Juneberry Amelanchier species



A multi-stemmed shrub or tree that bears white flowers in spring followed by edible purplish-black fruit. Excellent red-orange fall colors. Tree-form varieties include 'Allegheny',



'Autumn Brilliance', 'Princess Diana', and 'Robin Hill'. Native to riparian areas.

Height: 20-25' Spread: 10-15'

Hardiness Zone: 4-8





care-free and interesting plants at the OSU
Demonstration Garden in Redmond.

Height: 8' Spread: 10-12' Hardiness Zone: 4-8



In Central Oregon, consider plants that are more commonly grown in the Intermountain West instead of the Pacific Northwest.

Shade trees

These larger trees provide shade as they mature, cooling your home in summer and providing excellent fall color in the landscape.

Ash, Autumn Purple®
Fraxinus americana 'Junginger'





Dense, rounded shade tree with beautiful maroon fall color. Similar to green ash but requires more water. Seedless. Note: This plant is in decline on an international and national level due to an invasion of emerald ash borer (insect). This pest has not yet been detected in Oregon but has been detected as far west as Colorado.

Height: 40-60' Spread: 20-40' Hardiness Zone: 3-9



Ash, Green Fraxinus pennsylvanica



Large upright shade tree with rounded growth habit and nice yellow fall color. Good alternative to maples and oaks. All varieties are male and fruitless. Note: This plant is in decline on an international and national level due to an invasion of emerald ash borer (insect). This pest has not yet been detected in Oregon but has been detected as far west as Colorado. Varieties include 'Cimmzam', 'Marshall', 'Patmore', and 'Summit'.

Height: 40-60' Spread: 20-40' Hardiness Zone: 3-9



Birch, River Betula nigra



One of the best birches for Central Oregon as it is immune to the bronze birch borer, which is a serious pest of white-barked birch.

This attractive multi-stem tree has peeling cinnamon brown bark and green leaves in summer. Provides winter interest and is drought tolerant once established. Cultivars include 'Dura-Heate' and 'Heritage'.

Height: 15–50' Spread: 15–40'

Hardiness: Zone 4-9



Catalpa, Western or Northern Catalpa speciosa







Irregular, rugged growth habit requiring a large area. Bears beautiful white, orchid-like flowers in early summer followed by a long, brown seed pod. Large, heart-shaped, green leaves. Very tolerant of most soil types and conditions. Good for large spaces.

Height: 40-60' Spread: 20-25'

Hardiness Zone: 4-8



Honeylocust, Thornless Gleditsia triacanthos var. inermis cvs.



'Sunburst'

The fine leaves provide a filtered-shade environment. There are many thornless and seedless cultivars available in various sizes and growth



habits. Cultivars include 'Imperial'', 'Shademaster', 'Skyline'', 'Sunburst''. Keep healthy to avoid insects and disease.

Height: 35–40' Spread: 30–50' Hardiness Zone: 3–9



Maple, Red Acer rubrum or Acer x freemanii (red maple hybrids)







'Greenspire'

These trees have a pyramid-shaped, dense growth habit. Medium to dark green, heart-shaped leaves. Fragrant creamy-yellow flowers in summer. Susceptible to sunscald; protect by winter wrapping. Yellow fall color. Favorite of bees. Susceptible to aphids if under environmental stress. Keep healthy. Do not use an insecticide for aphid management when in bloom to prevent spraying bees. Cultivars include *T. cordata* 'Greenspire' (Litteleaf Linden) and *T. americana* 'Redmond' (American Linden).

Height: 30-60' Spread: 20-40' Hardiness Zone: 2-8









Large, attractive, stately tree with dense foliage. Growth habit can spread wide, or be upright and narrow, depending on variety. One of the hardier types of maple for Central Oregon. Summer leaf color can vary from green to maroon to variegated. Usually yellow fall color. Many cultivars available with various shapes and sizes. Cultivars include 'Columnare', 'Crimson King', 'Crimson Sentry', 'Deborah', 'Emerald Queen', and 'Royal Red'. Keep healthy to prevent attracting aphids. Not invasive in Central Oregon.

Height: 40-60' Spread: 30-50' Hardiness Zone: 3-7



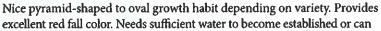


exhibit dieback. Once established makes for an excellent addition to the landscape. Some of the more popular cultivars of red maple include 'Armstrong,' 'Bowhall' Red Sunset*', and 'October Glory*'. Cultivars of the Freeman maple include 'Celebration*'; and 'Autumn Blaze*'.

Height: 30-50' Spread: 20-30'

Hardiness Zone: 3-9





Maple, Sugar Acer saccharum



Upright-oval to rounded growth habit. An underused shade tree for Central



Oregon with large medium-colored green leaves in summer. Fall color, although not as showy as in the northeastern U.S., can be beautiful shades of red, orange, and yellow. Growth rate is not as fast in Central Oregon. Varieties include 'Commemoration' (more upright growth habit) and 'Green Mountain' (more broad growth habit).

Height: 30-45' Spread: 20-30'

Hardiness Zone: 4-8



Oak, Bur or Mossycup Quercus macrocarpa



A handsome tree with an irregular growth habit and interesting moss-like covered acorns.



Dark green leaves. Very adaptable in tough environments and long-lived. Slow-growing, easy-care tree for larger lots.

Height: 50-70' Spread: 40-60' Hardiness Zone: 3-8



Oak, Pin Quercus palustris



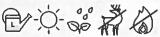
Has a pyramidshaped growth habit with the lower branches being more pendulous (low hanging). Will hold its leaves



into late winter. Glossy green leaves in summer turning red or brown in fall. Can become chlorotic (turn abnormally yellow) in high pH soils.

Height: 60-70' Spread: 25-40'

Hardiness Zone: 4-8







One of the easiest shade trees to grow in Central Oregon, with little to no pest problems. Slow growing. Attractive, glossy, green leaves in summer changing to red or yellow fall color. This tree is a good choice for medium to large lots because of its mature size. Acorns will develop over time.

Height: 60-70' Spread: 60-70'

Hardiness Zone: 3-7



Evergreen trees and shrubs

Evergreens will keep their needles throughout the year, providing winter color in your landscape. They also provide an excellent windbreak if planted on western or northern exposures.

Cedar, Blue Atlas or Weeping Blue Atlas Cedar

Cedrus atlantica 'Glauca' or Cedrus atlantica 'Glauca Pendula'





Weeping or 'Glauca pendula'

An attractive conifer with a pyramidshaped growth habit. Needles are blue to silver. There are some mature specimens in Central Oregon, however, they are marginal (barely adaptable) in the high desert. Best if planted in a site protected from the wind. The weeping variety can be a fun accent plant in a landscape. May be short-lived in Central Oregon. Weeping Blue Atlas Cedar will get to be 15 to 20 feet tall and wide, and may need staking to develop a central leader.

Height: 40-60' Spread: 30-40' Hardiness Zone: 6-9



Fir, White or Concolor Abies concolor



Beautiful color and growth habit for an evergreen. The needles are bluish-green, soft, and flat. Prefers some protection from direct wind. Can tolerate dry conditions but prefers moist sites for best performance. Can be marginal (barely adaptable) in Central Oregon.

Height: 50–60' Spread: 20–25' Hardiness Zone: 3–7





Juniper, Chinese

Juniperus chinensis

Juniper species Juniperus species



Junipers are a large group of evergreens

range of sizes, shapes, and colors. These

fast-growing, cold-hardy plants can be

utilized for windbreaks, groundcovers, or

hedges. They are available in low-growing

species and upright tree forms. The foliage

on juniper can be shades of silver, blue,

green, and gold, depending on variety.

Fruit is typically round and blue. Most

species of juniper are drought tolerant;

available for the home landscape in a broad

These include spreading or upright type of junipers; available in all shades of gray, green, blue, and gold. Cultivars include 'Blue Point', 'Sea Green', 'Spartan', and 'Torulosa' (Hollywood Juniper).

Juniper, Common

Juniperus communis Cultivars include 'Blue Pacific'.

Juniper, Creeping

Juniperus horizontalis

A low-growing, creeping shrub with trailing branches. Good selection to cover a slope for erosion control. Foliage is usually blue during the summer, changing to a purple during the winter months. Cultivars include 'Blue Chip', 'Bar Harbor', 'Prince of Wales', 'Wiltonii', or 'Blue Rug'.

Juniper, Hybrid

Juniperus x media
Cultivars include 'Old Gold' and 'Sea Green'.

Juniper, Pfitzer

Juniperus x Pfitzeriana

Height/Spread: Size will vary depending on variety

however, winter watering is recommended.

One of the best options in creating a year-

Hardiness: Zone 3-9

round shrub border.



Juniper species, continued next page

Juniper species, cont'd Juniperus species



'Blue Arrow



Juniper, Rocky Mountain

Juniperus scopulorum

An upright, conical evergreen that can be used as a screen or hedge. Foliage ranges in colors from silvery-blue to green. Fruit is gray, blue, or black. Cultivars include 'Gray Gleam', 'Moonglow', 'Wichita Blue', 'Blue Arrow', and 'Skyrocket'.

Juniper, Savin

Juniperus sabina

A spreading-type of juniper with peeling reddish-brown bark and blue-black fruit. The foliage is typically all scale-type needles, giving these junipers a softer look. Cultivars include 'Broadmoor', 'Buffalo', and 'Tamariscifolia'.

Juniper, Singleseed

Juniperus squamata
Cultivars include 'Blue Star'.

Larch, Western
Larix occidentalis



An attractive deciduous conifer with a pyramidshaped growth habit and soft, green needles that turn yellow and

drop in fall. Needs to be planted on a large site due to its mature size.

Height: 100-180' Spread: 30-40'

Hardiness Zone: 4-7



Pine, Austrian *Pinus nigra*





Evergreen with a dense oval growth habit, similar to Ponderosa pine when young. Needles are dark green and are from 3 to 5 inches long.

Height: 40-50' Spread: 15-20'

Hardiness Zone: 4-7



Pine, Bosnian

Pinus heldreichii (leucodermis)



Slow growing.

Height: 30–40' Spread: 10–15'

A dense pyramid-shaped tree with dark green

needles. Can be used for a windbreak or accent tree.

Hardiness Zone: 5-8





'Compact Gem'

'Compact Gem'

Pine, Bristlecone *Pinus aristata*



Evergreen with an irregular, dense growth habit. Very slow growing. The branches



produce "bottlebrush" type needles covered with resin dots. One of the smaller evergreens for a landscape.

Height: 10-30' Spread: 15-20' Hardiness Zone: 4-7



Pine, Ponderosa

Pinus ponderosa

Pine, Limber Pinus flexilis 'Vanderwolf'



Undeniably one of the most attractive and fastest growing pines for Central Oregon. Very flexible branches on this evergreen, hence the name. Bluish-green needles grow in



groups of five. Attractive silver bark and large cones.

Height: 30-40' Spread: 12-15' Hardiness Zone: 4-7

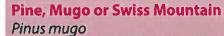


Beautiful native pine tree with long green needles in groups of two or three. Growth habit becomes more open with age. Interesting bark texture and cinnamon-brown bark color. For large spaces.

Height: 50-60' Spread: 20-25' Hardiness Zone: 3-6











Teeny'



Shrub-like evergreen with variable shapes and sizes. Several dwarf cultivars available. Susceptible to pine needle scale, if under environmental stress. Cultivars include var. mugo (Mugo Pine) or var. pumilio (Dwarf Mugo Pine), 'Mops', 'Sherwood Compact', and 'Slowmound'.

Height: 2-20' Spread: 3-20' Hardiness Zone: 2-7



Be sure to allow enough space for a plant to fill in without having to severely prune it or move it as it matures.

White Pine, Eastern or White Pine, Western

Pinus strobus or Pinus monticola



Very attractive soft, greenneedled pines that are similar in appearance.



Growth habit can be upright, weeping, or dwarf, depending on variety. Best protected from harsh wind and sun. Popular varieties for both include 'Nana' (dwarf), 'Pendula' (weeping), and 'Fastigiata' (upright) in the Eastern White Pine family.

Height/Spread: Size will vary depending on variety
Hardiness Zone: 3–7



Spruce, Colorado Blue *Picea pungens* var. *glauca*







Evergreen with strong, pyramid-shaped growth. Several cultivars with various colors and growth habits, from pendulous to round. Most drought-tolerant spruce for Central Oregon. Several dwarf cultivars available also. Varieties include 'Baby Blue Eyes', 'Fastigiata', 'Fat Albert' (more dense), 'Glauca Fastigiata' (columnar), 'Glauca Globosa' (Dwarf Globe Blue Spruce), 'Glauca Pendula' (weeping), 'Hoopsii', and many others. Colorado Spruce (*Picea pungens*) is a very similar green needled spruce.

Height: 50-70' Spread: 30-35'

Hardiness Zone: 2-8



Broadleaf evergreens

This group of plants will retain their leaves throughout the winter months. Their foliage may take on a winter color and then green-up again in spring. Winter watering recommended, especially during dry winters.

When watering your perennials, trees, and shrubs, consider deep watering every three to four days.

Grape Holly, Oregon Mahonia aquifolium







Native upright evergreen with shiny, dark green leaves in summer changing to purplish-red in the fall. Oregon state flower. Yellow flowers in the spring followed by bluish-black berries.

Height: 5-6' Spread: 5-6' Hardiness Zone: 3-9



Holly, Creeping Mahonia repens



Similar to Oregon grape holly but smaller in size. Spreading green leaves turning purplish-red in fall. Yellow flowers followed by bluish-black berries.

Height: 12-18" Spread: 2' Hardiness Zone: 3-8



Mountain Mahogany, Curl-leaf Cercocarpus ledifolius





Upright, course-textured shrub with small dark green leaves emerging from slender gray stems. Seeds have an interesting, silky, corkscrew-shaped tail.

Height: 10-15' Spread: 10-15' Hardiness Zone: 4-9

Kinnickinnick

Arctostaphylos uvar-ursi



A native, mat-forming shrub with glossy, green leaves. A pinkish-white flower in spring



followed by a red berry in the fall. A reddish fall color. Varieties are available.

Height: 4-8" Spread: 10-15' Hardiness Zone: 2-6



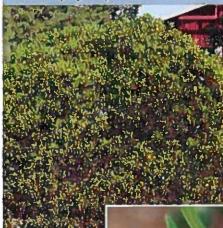
P.J.M. Rhododendron and Azaleas

Rhododendron x P.J.M. and Rhododendron species



'P.J.M. Rhododendron'

Manzanita, Greenieaf Arctostaphylos patula



Oval, somewhat spreading shrub with flattened, shiny, bright green leaves. Very distinct, smooth, reddish-brown bark,



which provides interesting winter texture. Pinkish-white flowers in spring.

Height: 4-6' Spread: 4-6' Hardiness Zone: 4-9





'P.J.M. Rhododendron'

The P.J.M. Rhododendron is an attractive broadleaf evergreen with dark green foliage and is resistant to root weevil damage. Gets covered with lavenderpink blooms. One of the more cold-hardy varieties

for this area. Other cold-tolerant azaleas for this area include varieties found in the Northern Lights and Exbury series. Both rhododendron and azaleas should be planted with north- or east-facing exposure.

Height: 3-5 Spread: 3-7' Hardiness Zone: 4-8







Azalea

Yucca Yucca species

Recognized by their sword-like leaves in various shade of green, gray-green, or variegated green and yellow. Produces stalks of white flowers during the growing season. Several varieties available.



Height: 2-4' Spread: 2-4' Hardiness Zone: 4-10



Vines

Vines can create privacy in your landscape by covering a fence while at the same time providing beautiful flowers and foliage.

Goldflame Honeysuckle Lonicera x heckrottii 'Goldflame'



'Goldflame'



'Goldflame'

A very attractive vine for covering fences or trellises. Dark green foliage with pink buds opening to golden yellow blooms. Very showy and long blooming. Needs to be attached with supports. Other varieties of honeysuckle vines include 'Dropmore Scarlet'.

Height: to 15' Hardiness Zone: 4-9



Hops Humulus lupulus



A hardy, climbing vine that can be both ornamental and used for flavoring beer. Once established, this

vine is fast growing and may need to be divided. Needs climbing support, preferably 14 feet or taller. Wrap bines (not vines) clockwise around support at the start of the season. Produces cones mid-season, which can be used for flavoring beer or as a dried flower. Can be susceptible to aphids and mites. Several commercial and ornamental varieties available.

Height: to 20'+ Hardiness: Zone 4-8



Clematis Clematis species



'Mikelite'



'Mikelite'

'Henryi'

One of the most ornamental vines available. Known for its beautiful flowers. which are both large and small and in a variety of colors. Some species are more drought tolerant than others. Needs to be attached with supports. Spring planting is recommended to aid in establishment. Keep roots cool by covering with 2 to 4 inches of mulch at the base of the plant. Prune down to 1 foot the first couple of seasons. Several varieties to choose from,

including 'Comtesse de Bouchard', 'Ernest Markham', 'Henryi', 'Jackmanii', 'Nelly Moser', and 'Ramona'. Western White Clematis (Clematis ligusticifolia) is a native variety with white blooms that is not invasive in Central Oregon.

Height: to 10 Hardiness Zone: 4-9



Silver Lace Vine Polygonum aubertii



shaped leaves. Produces big clusters of small, white flowers in late summer. Easy to establish and provides a screen for metal fences. No known disease or insect problems. Can potentially grow 8 to 12 feet per growing season. Adaptable to most environments. Can be cut back to control growth. Not invasive in Central Oregon.

Height: to 15' Hardiness Zone: 4-7



Trumpet VineCampsis radicans



A shrub-like vine with green foliage.

Produces beautiful orange, tubular, trumpet-shaped flowers in summer. Attracts hummingbirds. Not as fast growing as it would be in more temperate climates and can be difficult to establish in Central Oregon.

Height: to 15' Hardiness: Zone 4-9



Fruit trees and berries

Fruit trees and berries are ornamental and provide attractive, fragrant spring flowers and fresh edible fruit later in the season. Listed below are some of the more hardy fruit trees and berry crops for use in a landscape. Most fruit trees will require moderate water use. There are several Extension publications on fruit trees and berries that outline which varieties are best for Central Oregon:

- Selecting Berry Crop Varieties for Central Oregon https://catalog.extension.gregonstate. edulec1621
- Selecting Fruit Tree Varieties for Central Oregon Landscaping and Home Orchards https://catalog.extension.oregonstate, edu/ec1622

Apple Malus hybrids



Apples are the most reliable (for fruit) and hardy of the fruit trees for the high desert. There are several hybrids

available. Be sure and have the required pollenizer (another apple tree that provides pollen).



Virginia Creeper Pathenocissus quinquefolia







Strong vine that will cover walls, fences, and boulders. Dark green, lobed leaves that turn red to orange in fall. Flower is not showy. Purplish fruit set. Grown for its ability to cover. Growth rate is not as fast in Central Oregon as in other places. Not invasive in Central Oregon.

Height: 20'+

Hardiness: Zone 3-9



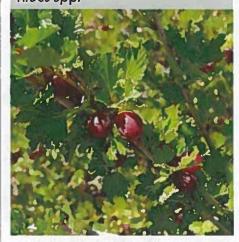
Cherry Prunus spp.



Sour cherry varieties (pie cherries) are more cold hardy than sweet cherry varieties in Central Oregon.



Currant and Gooseberry *Ribes* spp.

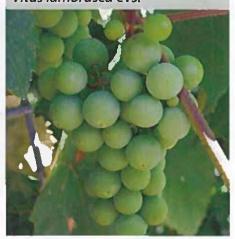


Currants or gooseberries are attractive shrubs that provide edible berries used in making jams or jellies. Typically very drought tolerant, they require additional irrigation if grown for fruit. Gooseberries have thorns and may be somewhat deer-resistant.



Grape

Vitus lambrusca cvs.



A vining plant that produces edible berries, once established. Table grapes may need some protection (frost cloth) in the spring, if temperatures remain cold. Needs strong support for vining.



Haskap (Honeyberry) Lonicera caerulea emkphylocalyx



A small, rounded shrub in the honeysuckle family that produces blueberry-like fruit. More adaptable to Central Oregon soils than blueberry bushes.



Peach

Prunus persica cvs.

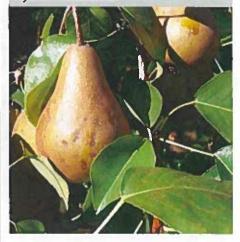


A beautiful tree that produces pink flowers followed by fruit in years when the blossoms do not sustain frost damage. Self-pollinated.



Pear

Pyrus communis



Tree with attractive white blossoms in spring. Pear trees prefer well-drained soils. Some varieties are self-fertile and some require pollinators.



Pear, Hardy Asian *Pyrus serotina*



One of the more reliable fruit-producing trees for Central Oregon. Attractive white blooms in spring.



Serviceberry or Juneberry *Amelanchier* species

See ornamental trees (page 14) and largesized shrubs (page 35). Both an ornamental and a fruiting species.

Strawberry *Fragaria ananassa* cvs.



A low-growing groundcover that produces edible sweet berries that can be eaten fresh or used in jams or jellies. There are June-bearing, everbearing, and day-neutral (bears fruit several months) varieties available. Alpine strawberry is also very adaptable.



Plum or Prune

Prunus cvs.



Ornamental trees that produce sweet and sour plums depending on variety. Some varieties are self-fertile but yield better fruit with a pollinator; others require a pollinator.



Raspberry

Rubrus cvs.





'Fall Gold'

Thorny, multi-stem shrubs bearing edible red, black, or yellow fruit that can be eaten fresh or used in jams or jellies. There are

both summer-bearing and everbearing cultivars available.



Small shrubs

Small shrubs are typically between 1 and 5 feet high.

Coralberry, Hancock Symphoricarpos x chenaultii 'Hancock'



A low-growing shrub which works well on slopes for erosion control. Provides a shelter for wildlife. Produces white flowers followed by sparse pink berries. Green leaves change to yellow in fall. Indian currant coralberry (Symphoricarpos orbiculatus) is similar but larger in size.

Height: 1½-2' Spread: 6-8' Hardiness Zone: 4-7





Cotoneaster, Cranberry Cotoneaster apiculatus



A semi-broadleaf evergreen. Dark, shiny, green leaves change to burgundy in the fall. Interesting mounding type of growth habit.

Produces tiny pink flowers followed by a red cranberry-like fruit that persists into winter. East-facing exposure is best. Not invasive in Central Oregon.

Height: 3' Spread: 3-6' Hardiness Zone: 4-7



Kelsey Dogwood Cornus stolonifera 'Kelseyi'



Plant has a compact rounded growth habit with white flowers in spring. Red stems provide winter interest.

Height: 2-3' Spread: 2-3'

Hardiness Zone: 2-8



Currant, Alpine *Ribes alpinum*

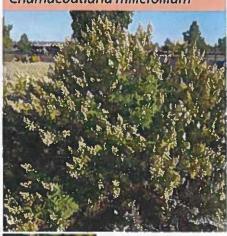


Small shrub. Good in mass plantings to create a shrub border. Dense with bright green foliage and bland, yellow fall color.

Height: 3-5' Spread: 4-5' Hardiness Zone: 2-7

P/ 0-2

Fernbush or Desert Sweet Chamaebatiaria millefollium





Semi-evergreen shrub with fuzzy, scented, fern-like green leaves. Produces white flowers in summer. Irregular, unkempt-looking growth habit.

Height: 3-6' Spread: 3-6' Hardiness Zone: 4-10



Potentilla or Cinquefoil Potentilla fruticosa





Hardy, bushy shrub with small grayish-green leaves. Produces flowers all summer long in shades of yellow, gold, white, pink, red, and orange. Cultivars include 'Abbottswood', 'Gold Drop', 'Goldfinger', 'Tangerine', and many others. Works well as a shrub border.

Height: 2-4' Spread: 2-4'

Hardiness Zone: 2-7





Rabbitbrush, Gray Chrysothamnus nauseosus



'Gray Rabbitbrush'

Late-blooming, irregular-shaped shrub. Produces yellow flowers. Bluish-green, needle-like foliage. Can be



'Gray Rabbitbrush'

pruned each season in spring. Reseeds easily. Green Rabbitbrush (Chrysothamnus viscidiflorus lanceolatus) is another native that is similar but more compact with green leaves.

Height: 2-6' Spread: 2-4' Hardiness Zone: 4-6





'Green Rabbitbrush'

Determine what kind of soil you have in your yard and amend it accordingly. In Central Oregon, the soil is typically sandy and sterile with lots of rock. Water tends to drain right through the soil if left unamended.

Sage, Russian Perovskia atriplicfolia



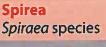


Fine, feathery textured shrub that performs more like a perennial. Silvery-gray, finely dissected leaves with a sage-like aroma.

May die back in winter and can be cut back in late fall or early spring. Produces beautiful lavender-blue flowers in late summer. Do not overwater. Will reseed or spread by rhizomes. Better cultivars include 'Blue Spires' (sterile, so will not reseed), 'Lacey Blue' (dwarf), and 'Little Spires' (dwarf).

Height: 3-5' Spread: 3-4' Hardiness Zone: 4-8













Douglas Spirea-native

Popular, clump-forming shrub which produces white or pink bowl-shaped

flowers. Leaves are generally green but can be tinted in shades of red or yellow. Many cultivars available, including 'Anthony Waterer', 'Gold Mound', 'Goldflame', 'Little Princess', and 'Neon Flash'. Plant is very easy to care for. Native spirea (S. douglasii) has attractive pink blooms and can be used in a rain garden.

Height: 2-4' Spread: 2-4'

Hardiness Zone: 4-8



Spirea, Blue Mist or Bluebeard Caryopteris x clandonensis





Dense, rounded shrub with grayish-green leaves. Produces lavender-blue flowers in late summer. Foliage has a sage-like

scent. Nice color for late season. Attracts bees. Can dieback in winter and be cut back like a perennial in early spring. Will reseed. Cultivars include 'Blue Mist' and 'Dark Knight'.

Height: 3-5' Spread: 3-5' Hardiness Zone: 5-10



Sumac, Gro-Low Rhus aromatica



Mounding shrub with dark green leaves. Fall color is orange to red to purple. Tiny yellow flowers change to fuzzy red fruit. Prefers additional moisture.



Height: 1-3' Spread: 5-7' Hardiness Zone: 4-9



Medium shrubs

Medium shrubs are typically between 3 and 6 feet high.

Abelia, Fragrant Abelia mosanensis





ste O sp V4

An interesting shrub with loose, upright arching stems. Very fragrant pink flowers open in spring. Orange to red fall color. No serious pests. This species of abelia is more cold hardy than others. Varieties include 'Sweet Emotion'.'

Height: 4-6' Spread: 4-6' Hardiness Zone: 4-8



Barberry

Berberis species





Commonly used small- or medium-sized shrub with a dense, rounded growth habit. Branches have spines and small leaves in various foliage colors, ranging from purplish red to gold. Produces small yellow flowers followed by ornamental red fruit that persists into winter. Not invasive in Central Oregon. Varieties include 'Crimson Pygmy' (dwarf), 'Rose Glow', 'Aurea' (gold leaf and sterile).

Height: 4-6' Spread: 4-6' Hardiness Zone: 4-8



BitterbrushPurshia tridentata



A native semievergreen shrub with grayish-green leaves. Produces creamy-yellow flowers in spring followed by reddish



berries. Very drought tolerant. Important forage for deer and elk.

Height: 5-8' Spread: 4-8'

Hardiness Zone: 4-9



Currant, Golden *Ribes aureum*







Produces yellow flowers followed by edible purple fruit. Fall color can be red to yellow. Prefers additional moisture.

Height: 4-6' Spread: 4-6' Hardiness Zone: 4-8



Burning Bush, Dwarf *Euonymus alatus* 'Compactus'





Rounded shrub with green leaves and "winged" bark. Excellent scarlet fall color. Creates a nice shrub border. Does best with east-facing exposure.

Height: 4-6' Spread: 4-6' Hardiness Zone: 4-8



Fothergilla Fothergilla major



'Mt. Airy'

An attractive shrub with seasonal interest from the white, scented, brushlike blooms in spring to the spectacular fall color. Nice rounded growth habit. Will perform best in a north- or east-facing location. Varieties include 'Blue Shadow' and 'Mt. Airy'. The 'Mt. Airy' variety has performed great in the OSU Demonstration Garden in Redmond.

Height: 5-6' Spread: 5-6' Hardiness Zone: 4-9



Chokeberry, Black *Aronia melanocarpa*



An upright, multi-stem shrub with glossy, green leaves and white flowers in spring. Blackish fruit is edible and can be used to make juices, jellies, and jams. Plant has high wildlife value and reddish-purple fall color. Varieties include 'Autumn Magic' and 'Viking'.

Height: 3-6' Spread: 3-6' Hardiness Zone: 3-9







'Mt. Airy'

Hydrangea

Hydrangea arborescens or Hydrangea paniculata



'Little Lamb'

Smooth hydrangea (H. arborescens) and Panicle hydrangea (H. paniculata) varieties do best in Central Oregon. These shrubs produce nice, medium-green foliage and very showy flowers that range from white to pink. Varieties that have performed well include 'Annabelle', 'Grandiflora', 'Limelight', 'Little Lime', 'Little Lamb', and 'Quickfire'.

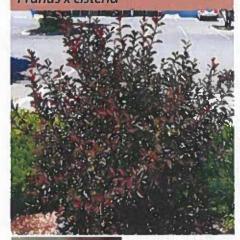
Height: 3-5' Spread: 4-6 Hardiness Zone: 3-9





'Annabelle'

Plum, Cistena or **Purpleleaf Sandcherry**





Fast-growing, medium-sized shrub with purple foliage during the summer. Produces pinkishwhite flowers in spring. Will send up suckers.

Height: 4-6 Spread: 4-6' Hardiness Zone: 4-8







Red-leaved rose-R. glauca



Red-leaved rose-R. glauca

Meyer Lilac Syringa meyeri

A compact, spreading lilac with very fragrant blooms. Tolerates tough growing conditions. Showy purple flowers, typically in May. Cultivars include 'Palibin' at 4-5' tall.



Height: 4-8' Spread: 6-8' Hardiness Zone: 3-8



Hardy shrub roses and regular rose bushes are known for their blossoms, which are beautiful in color and scent. Most have green foliage, masses of flowers, and an arching or climbing type of growth habit. May bloom continuously or once during the season. Some display excellent fall color and ornamental rose hips in late fall/winter. Spiny branches make them less desirable for deer. Wood's Rose (R. woodsia), a native wild rose in Central Oregon, has a spreading growth habit. Produces single pink flowers in summer. There are too many rose varieties to mention; however, some of the more adaptable hardy shrub roses include those in the Meidiland series and Morden (Parkland) series.

Height: 2-6 Spread: 2-6' Hardiness Zone: 2-9



Sagebrush, Big

Woody-based shrub with soft, aromatic, silvery-gray foliage. White to yellowish feathery flowers in spring. Can be pruned to be kept



tidy. This plant is an important winter browse plant for native wildlife. There are other species of Artemesia that are native to Central Oregon.

Height: 3-6 Spread: 3-6' Hardiness Zone: 4-9



Sandcherry, Western Prunus besseyi







Open, irregular growth habit. Produces fragrant white flowers in spring followed by an edible black fruit. Leaves are a grayish-green that change to coppery-red in fall. Can sucker if overwatered.

Height: 4-6 **Spread: 4-6'** Hardiness Zone: 3-7



Snowberry

Symphoricarpos albus







Upright, arching shrub with bluish-green leaves. Pink flowers in summer change to white, rounded fruit that persists through the winter.

Height: 4-6 Spread: 4-6 Hardiness Zone: 3-7



Viburnum, Compact American Cranberry

Viburnum trilobum 'Compactum'

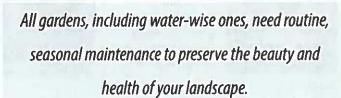




An excellent compact, rounded shrub. Green, maple-like foliage in summer changes to orangered in fall. Produces white flowers followed by minimal red fruit in fall. East-facing exposure is best. Compact European Cranberry (Viburnum opulus 'Compactum') is very similar.

Height: 4-6 Spread: 4-6' Hardiness Zone: 2-7





Large Shrubs

Large shrubs are generally 6 feet or taller.

Buckthorn, Fine Line® Fern leaf Rhamnus frangula 'Ron Williams'





A fine-leaved buckthorn provides a feathery textured shrub with dark green leaves changing to yellow in fall. This cultivar is non-invasive. Other species of buckthorn are known to be invasive in other parts of the country.

Height: 5-7' Spread: 2-3' Hardiness Zone: 2-7



A well-planned, water-wise landscape can be attractive, colorful, and rewarding.

Butterfly Bush Buddleia species



Known for its beautiful, nectar-rich, fragrant blooms in late summer. In Central Oregon, this plant can be difficult to establish. May need to be cut back each season to 12 inches above ground. Buddleja davidii is invasive in other parts of the state, therefore only Oregon Department of Agriculture (ODA) approved, sterile varieties are available for sale. Some of these varieties include 'Asian Moon', 'Blue Chip' 'Miss Molly', 'Miss Ruby', and several of the Flutterby Grande'" cultivars such as Peach Cobbler. Attracts hummingbirds.

Height: 4-6' Spread: 4-6' Hardiness Zone: 5-9



ElderberrySambucus species



Black Lace™

A multi-stemmed shrub with arching, spreading branches. The purple leaf varieties are particularly showy.

Black Large Man

Has large white-pink blooms in summer followed by edible purple-black fruit that can be used for jellies, jams, and wine. Native variety is S. cerulea (Blue Elderberry). One of the more spectacular varieties is S. nigra Black Lace" which has finely dissected purplish-black leaves, pink flowers, and purple fruit. Can be used as a hedge.

Height: 6-8' Spread: 6-8' Hardiness: Zone 4-9



Forsythia Forsythia cultivars



Known for its abundance of yellow flowers covering the entire branch in early spring. Has a vase-shaped growth habit; can be used as a shrub border. Flowers may get nipped with a spring frost.

Height: 6-8' Spread: 6-8' Hardiness Zone: 4-8



Lilac, Common or French Syringa vulgaris



'President Grevy'





Large shrubs known for their beautiful, fragrant blooms in spring. Available in many varieties with flowers in shades of white, lavender, purple, and pink. Can be used for a hedge. Needs additional moisture to become established the first three years then becomes more drought tolerant. Varieties include 'Charles Joly', 'Ludwig Spaeth, 'Madame Lemoine,' President Grevy, and 'Sensation'.

Height: 8-12 Spread: 6-12' Hardiness Zone: 3-7



Maple, Vine Acer circinatum







A native shrub with an open, irregular growth habit. Does not

perform well in full sun; east-facing location is ideal. Nice green stems when young; medium green leaves in summer. Healthy plants can have red, orange, or vellow fall color.

Height: 10-15' Spread: 10-15' Hardiness Zone: 5-9



Mockorange Philadelphus species





Lewis' mockorange-native

Upright, compact shrub with glossy, green leaves. Excellent. sweet-scented white flowers



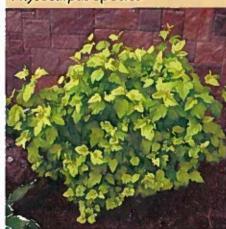
Lewis' mockorange-native

in late summer. Size varies depending on variety. Native variety is P. lewisii (Wild Mockorange). Another popular cultivar is 'Minnesota Snowflake'.

Height: 5-8' Spread: 5-8' Hardiness Zone: 3-8



Ninebark Physocarpus species

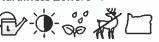




'Diablo'

Shrubby-type plant with dense, green, purple, or golden foliage. Produces white flowers in summer. Distinct peeling bark. Can be used as a hedge. Easy to grow. Varieties include Diablo* (purple foliage), 'Dart's Gold', Summer Wine™ (smaller), and Little Devil™ (smaller). Pacific ninebark (P. capitatus) is a native with green leaves in summer.

> Height: 6-8' Spread: 6-8' Hardiness Zone: 3-7



Oceanspray or Desert Oceanspray

Holodiscus discolor or H. dumosus



Desert Oceanspray

This native shrub has arching to upright branches and an irregular growth habit. Best known for its fragrant, attractive cream-colored flowers that hang in



Desert Oceanspray

clusters from the branches in summer. H. dumosus (Desert Oceanspray) is smaller (6 to 8 feet) and more adaptable to dry sites.

Height: 10-15' Spread: 15-20' Hardiness Zone: 4-8



Serviceberry or Juneberry Amelanchier species



Red Osier or Redtwig Dogwood Cornus stolonifera





A rounded, broad-spreading, multi-stemmed shrub with dark green leaves in summer that turn reddish-purple in fall. Notorious for its bright red, shiny



stems in winter. Produces white flowers May to June. Cultivars include 'Baileyi,' 'Flaviramea' (yellow twigs), and 'Isanti.' Can tolerate dry conditions but prefers more moisture.

Height: 7-9' Spread: 10'+ Hardiness Zone: 2-8



Rose of Sharon Hibiscus syriacus





This late-blooming shrub can work well in a shrub border. Large blooms in a variety of colors in late summer. Has an upright, vase-like growth habit. Select more coldhardy varieties.

Height: 8-12' Spread: 6-10' Hardiness Zone: 5-8







An upright, less dense, native shrub with green leaves. White flowers in spring followed by edible, bluish-purple berries that are good for jams or jellies. Excellent yellow, orange, and red fall colors. Several varieties available including 'Regent' (more compact). Related species include A. canadensis (Shadblow serviceberry).

Height: 6-10' Spread: 5-12' Hardiness Zone: 3-10



Smokebush or Smoketree Cotinus coggygria



A large ornamental shrub with unique foliage and showy parts of the flower that result in smoke-like plumes.

Foliage is green or purplish, depending on variety. Varieties include 'Grace' and 'Royal Purple'.

Height: 10-15' Spread: 10-15' Hardiness Zone: 4-8



Viburnum, Wayfaring Tree Viburnum lantana



'Mohican'



Sumac, Smooth or **Staghorn Sumac** Rhus glabra or Rhus typhina



'Laciniata'



A bushy, tropical-like shrub with dark green leaves in summer that change to beautiful red, orange, and yellow colors in fall. Not suitable for small

planting areas as it will sucker to produce groves. Female plants produce a red, hairy fruit, which persists into winter. R. typhina (Staghorn sumac) is similar to smooth sumac but branches are covered in fine hairs to produce a velvety touch. Varieties include Laceleaf Staghorn Sumac (R. typhina 'Laciniata'), which has lacy, finely dissected leaves.

Height: 8-15 Spread: 10-15'

Hardiness Zone: 3-8



Viburnum, Nannyberry Viburnum lentago



Large ornamental shrub with glossy, green leaves. Produces large clusters of white flowers in late spring followed by fruit



that emerges green and changes from red to purple to black. Will sucker some. Also available in tree form. Excellent red to purple fall color.

Height: 15-18' Spread: 6-10' Hardiness Zone: 2-8







Large ornamental shrub with fuzzy, leathery, green leaves. Produces large clusters of white flowers in late spring followed by black fruit when ripe. Excellent purplish-red fall color. Pest free. Varieties include: 'Mohican' (compact at 6- to 8-inch height and 6- to 9-inch spread). Easy to grow. Use as a hedge or specimen plant.

Height: 10-15' Spread: 10-15' Hardiness Zone: 4-8



Willow Salix species



Arctic Blue Willow



Dappled willow

Fast-growing shrubs with narrow leaves and dense branching. Several native and cultivated varieties



Dappled willow

available. Can be susceptible to insect and disease. Popular cultivated varieties include Dapple willow (S. integra 'Hakuro-nishiki') and Arctic Blue willow (S. purpurea).

Height: 6-30' Spread: 5-20' Hardiness Zone: 2-9



Ornamental grasses

Ornamental grasses can be used effectively as specimen plants and to add texture, create movement, and provide winter interest to any landscape. Cut back down to the ground in fall (to prevent those that reseed from doing so) or in early spring. Grasses can reseed or spread through rhizomes; however, in Central Oregon some seeds will not ripen (to reseed) because of the short growing season. Do not plant near waterways. Select sterile varieties if available or plant in contained areas.

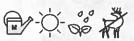
Avena, Blue or Blue Oat Grass Helictotrichon sempervirens





Dense, rounded clump grass. Bluish-green blades that become graceful and arching with maturity. Produces brown oat-like seed heads. Overwatering affects leaf color.

Height: 2-4' Spread: 2-3' Hardiness Zone: 4-9



Black Mondo Grass Ophiopogon planiscapus



Interesting leaf color for any landscape. Foliage is dark, purplish-black. Flowers are purple followed by purple berries. Can be used in mass plantings.

Height: 5-6" Spread: 5-6" Hardiness Zone: 5-10

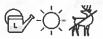


Bluestem, Little Schizachyrium scoparium



Densely tufted clump grass with grayishgreen leaves that change to red in fall. Produces spike-like flowers in summer. Cultivars include 'Prairie Blues', 'The Blues', 'Prairie Munchkin' and 'Little Heaven'.

Height: 2-3' Spread: 1-2' Hardiness Zone: 4-9



Feather Reed Grass, Karl Foerster Calamagrostis x acutiflora





Beautiful, upright, narrow-growing ornamental grass. Used as a single specimen or in stands. Green blades with a feathery, purplish plume that blooms in summer. Prefers additional moisture. The flower changes to a tan seed head in late summer. Provides excellent winter texture. Can be cut back to the ground in early spring. Sterile and will not reseed. Other varieties include 'Overdam' and 'Avalanche'.

Height: 3-6' Spread: 1-2' Hardiness Zone: 4-10



Native plants support natural ecosystems by providing food and habitat for native pollinators and wildlife.

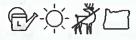
Fescue, Blue Festuca ovina glauca





Attractive clump-forming grass. Silvery-blue blades are a nice contrast in the landscape. Produces a light tan flower in summer. Can provide winter texture. Prefers additional moisture. Cultivars include 'Elijah's Blue' (compact) and 'Boulder Blue'. Idaho Fescue (*F. idahoensis*) is a native fescue that heavily reseeds, so it is best used in restoration sites.

Height: 10-12" Spread: 10-12" Hardiness Zone: 4-9



Fountain Grass Pennisetum alopecuroides

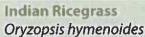


'Little Bunny'

An arching, rounded ornamental grass. Attractive bronze "foxtail" flowers are produced in summer. Also available in some annual varieties. Cultivars include 'Hameln' (dwarf) and 'Little Bunny' (dwarf).

Height: 2-3' Spread: 2-3' Hardiness Zone: 4-9

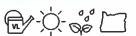






Upright, clump-forming grass with interesting, airy seed heads. Great for a dry, rocky location.

Height: 1-2' Spread: 2-3' Hardiness Zone: 3-7



Miscanthus Grass or Maiden Hair Grass Miscanthus sinensis





Fall color

One of the most beautiful ornamental grasses. Graceful, arching type of growth habit. Green or variegated foliage. Produces airy, white to russet plumes in late summer, depending on variety. Not invasive in Central Oregon because seeds likely do not have time to mature (ripen). Cultivars include 'Gracillimus' (very drought tolerant) and 'Morning Light'.

Height: 5-8' Spread: 3-5' Hardiness Zone: 4-7



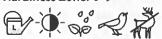
Once you understand and plan for how natural precipitation will play a role in your water-wise garden, the next step is to plan how to provide additional irrigation, if needed.

Switch Grass Panicum virgatum



Narrow, upright, clump-forming grass. Metallic blue blades of grass that change to yellow in fall. Produces airy, purple flowers. Prefers additional moisture. Heights vary with different cultivars including 'Cheyenne', 'Heavy Metal', 'Hot Rod', and 'Shenandoah'.

Height: 3-4' Spread: 3-4' Hardiness Zone: 4-9



Tufted Hair Grass Deschampsia caespitosa



Arching, mounding clump of green grass with unique, showy blooms and seed heads. Good container garden plant.

Height: 2-3' Spread: 1-3' Hardiness Zone: 4-9



Groundcovers

Groundcovers are low-growing perennials that often provide excellent coverage on slopes, aid in erosion control, and provide interesting foliage and beautiful flowers. The plants listed in this section are generally 12 inches or smaller. Hardiness zones will vary depending on variety; select ones in USDA Hardiness zone 3-5 for best adaptability.

Candytuft

Iberis sempervirens





Spreading, mounding growth habit with dark green foliage. Produces a profusion of white flowers in early spring.

Height: 6-12" Spread: 10-24" Flower: White

Bloom time: May-June



Curlicue Sage Artemesia versicolor 'Seafoam'



Grown for its unique silver foliage and mounding growth habit. Very drought tolerant and easy to care for. Adds interesting

color and texture to the landscape. Does not spread like other cultivated Artemesia. Does not bloom often.

Height: 8-10" Spread: 20-24"



Deadnettle

Lamium species



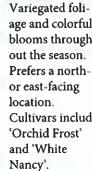
'Orchid Frost'



age and colorful blooms throughout the season. Prefers a northor east-facing Cultivars include 'Orchid Frost'

Height: 4-6" Spread: 15-18" Flower: Purple, pink, white Bloom time: April-May





Hardy Cactus





A large group of succulent plants in many shapes and sizes, often covered with spines. Winter-hardy cactus. Good for use in rock gardens.

Height: 3-48" Spread: 3-48" Flower: Purple, pink, red, yellow, white

Bloom time: May-July

or Pinks Dianthus species

Dianthus, Garden Carnation,

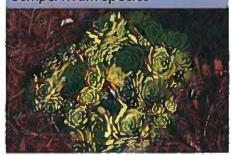


Green or grayish-green foliage covered with blooms. Clump-forming growth habit. Some varieties are fragrant. Cultivars include 'Firewitch'. Good for use in rock gardens.

Height: 2-12" Spread: 6-16" Flower: Pink, white, red Bloom time: May-August



Hens and Chicks Sempervivum species



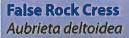


A unique groundcover with green, succulent, rosette-shaped foliage. The parent plant produces flowers and smaller plants or "chicks." Excellent in rock walls.

Height: 2-6" Spread: 6-10"

Flower: Pink, star-shaped rise up on a stalk from the "hen" Bloom time: June-August







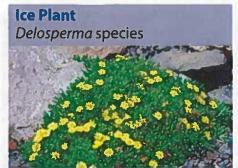


Mat-forming, spreading perennial with grayishgreen foliage. Attractive masses of flowers in spring. Good for use in rock gardens.

Height: 3-8" Spread: 10-15"

Flower: Purple, pink Bloom time: May-June





Yellow Ice Plant



Mesa Verde



Very low-growing groundcover with succulent, green foliage that changes to reddish-bronze in winter. Not suit-

able for areas with long-term snow cover. Yellow ice plant is one of the most coldhardy ice plants. Cultivars and varieties include D. cooperi (Purple Iceplant), Lavender Ice and Mesa Verde*. This is not the same plant as the invasive species Carpobrotus edulis found in California. Great for use in rock gardens.

Height: 1-3" Spread: 24-30" Flower: Multiple colors, daisy-like Bloom time: June



Phlox, Creeping or Moss Phlox subulata



A very popular spring bloomer. Linear, green leaves form a lowgrowing mat. Lots of cultivars are available. P. diffusa is one of the native, creeping phlox with pink blooms. Good for use in rock gardens.

Height: 4-6" Spread: 18-24" Flower: White, blue, pink, striped



Mount Atlas Daisy or Mat Daisy Anacyclus depressus





Feathery, silverygreen foliage. Can slowly self-seed in an area. Good for use in rock gardens.

Height: 1-2" Spread: 10-12" Flower: Small white, daisy-like with crimson on the underside of the petals Bloom time: May-June



Poppy Mallow or Prairie Winecup Callirhoe involucrata





Fine, green-leaved foliage with trailing stems; blooms for several months. Unique, cup-like blossoms. Height: 6-8"

Spread: 24-36" Flower: Magenta





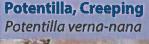


Gray, feather-like foliage and yellow, button-shaped flowers.

Height: 4-6" Spread: 18-24" Flower: Yellow

Bloom time: May-June

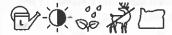






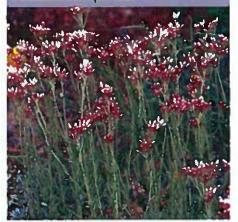
A mat-forming groundcover with green or silver leaves and bright yellow, saucer-shaped blooms. Can be used between pavers; tolerates light foot traffic. Native potentilla available.

Height: 2-3" Spread: 4-6" Flower: Yellow Bloom time: April-June





Pussytoes or Cat's Ears Antennaria species





A mat-forming perennial with silvery-white, hairy foliage. Works well in rock walls and between pavers. Native and cultivated varieties

available. Good for use in rock gardens.

Height: 2-12" Spread: 8-10"

Flower: Pink, white Bloom time: May-July



Sea Thrift *Armeria maritima*





Clumpforming
perennial with
grass-like foliage.
Flowers rise
up above the
mound with
pink or white
pom-pom-type
flowers. Good
for use in rock
gardens.

Height: 6-10" Spread: 8-12" Flower: Bright pink, white Bloom time: May-June



Snow-in-Summer Cerastium tomentosum





Fast-growing; covers a large area quickly. Provides a nice contrast with silvery-gray, woolly foliage. Good for use in rock gardens.



Height: 6–12" Spread: 24–36" Flower: White Bloom time: June–July

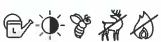


Soapwort Saponaria ocymoides



An attractive groundcover with bright pink flowers in late spring. Good for use in rock gardens.

Height: 4-5" Spread: 15-18"
Flower: Pink Bloom time: May-June





Speedwell Veronica species





Low-growing groundcover with glossy or fuzzy, green leaves. Very showy in full bloom. Good for use in rock gardens.

Height: 1-6" Spread: 12-18"

Flower: Blue, pink, white Bloom time: May-June



Stonecrop Sedum species



Groundcover with succulent foliage in shades of green to blue. Many droughtresistant varieties. Great for use in rock gardens.

Height: 2–12" Spread: 6–24"
Flower: White, yellow, pinkish-red
Bloom time: May–September



Thyme, Woolly Thymus pseudolanuginosus

Very low-growing, mat-forming ground-cover. Sage-green, woolly leaves change to a purplish color in winter. Tolerates light foot traffic. Works well between flagstones, pavers, and in rock walls.

Height: ½-1" Spread: 12-18"

Flower: Pinkish purple Bloom time: May-July



Sulfur Buckwheat Eriogonum umbellatum





Mat-forming perennial with green leaves. Both native and cultivated varieties available.

Height: 6–10" Spread: 24–36" Flower: Yellow Bloom time: July



White Rock Cress Arabis species



Low-growing perennial with dark green or variegated foliage. Produces masses of tiny flowers in spring. Native and cultivated varieties available. Good for use in rock gardens.

Height: 6-12" Spread: 12-20" Flower: White, pink Bloom time: April-May



Thyme Thymus species





Low-growing groundcover with fragrant leaves in shades of light to dark green, yellow, or variegated. Attractive in mass plantings when blooming. Works well



Height: 1-4" Spread: 6-18" Flower: Pink, white, purple Bloom time: May-August



Consider a plant's water use and its adaptability in the landscape.

Group plants with similar water, soil, and sunlight requirements into the same hydrozones (watering zones).

Perennials

Perennials survive two or more years in your landscape, often dying back in the winter, only to emerge again in spring. They provide a variety of colors, textures, shapes, and sizes. There are literally hundreds of perennials that are low water-use and work well in a water-wise garden. Hardiness zones will vary depending on variety; select ones in USDA Hardiness zones 3-5 for best adaptability.

Agastache or Hummingbird Mint Agastache species



A tall border perennial with grayish-green, mint-scented leaves. Produces beautiful fragrant tubular flowers. Blooms later in summer. Several varieties available, some are more cold hardy than others. Attracts hummingbirds.

Height: 24–30" Spread: 15–18" Flower: Orange, pink, rose, blue Bloom time: June–August



Basket-of-Gold Aurinia saxatilis







Gray-green foliage. Provides spring color with blooms in shades of gold to light yellow. Pruning is suggested after flowering to maintain shape. Excellent in rock gardens or in mass plantings.

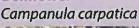
Height: 8–18" Spread: 6–12" Flower: Gold to yellow, tiny flowers

in clusters

Bloom time: April-May



Bellflower







This species of bellflower has a more compact growth habit. Flowers are typically bell-shaped. Good for use in rock gardens. Cultivars

include 'Deep Blue Clips', 'Rapido Blue', 'Rapido White', and 'White Clips'.

Height: 6-10" Spread: 8-12" Flower: Blue, purple, white Bloom time: June-September



Black-eyed Susan Rudbeckia species







Late-blooming perennial that looks excellent in mass plantings. Bright, golden, daisy-like flowers with black-yellow centers. Good as a cut or dried flower.

Height: 1-4 Spread: 1-2

Flower: Golden yellow, orange with a black, brown, green, or yellow center

Bloom time: August-September



Blanket Flower Gaillardia varieties





Grayish-green foliage and daisy-like flowers in various colors. Very drought tolerant. May be short lived. Fuzzy, round seed

head follows flowering; keep deadheaded for continuous bloom. Long-blooming perennial. Native and cultivated varieties available.

Height: 8-36" Spread: 12-24" Flower: Red petals tipped in gold, all gold, or burgundy with reddish-brown centers

Bloom time: June-September



Bleeding Heart Dicentra species







Western Bleeding Heart-native

A great shade-loving perennial that produces very showy heart-shaped flowers. Western Bleeding Heart (*D. formosa*) has pink blooms. Several cultivated varieties available. Easy to care for plant. Can be cut back when spent. Attracts hummingbirds.

Height: 3' Spread: 3' Flower: Pink, white, red Bloom time: April



Catmint Nepeta species





A long-blooming perennial with trumpet-shaped flowers and grayish-green, fragrant foliage. Cut back plant for repeat blooming.

Attractive to cats. It is best to avoid seedgrown varieties as they have a tendency to spread. Instead, select cultivated varieties such as 'Walkers Low' and 'Select Blue'.

Height: 12–28" Spread: 18–26" Flower: Blue to lavender trumpet shaped





Columbine Aquilegia species



Height: 10-36" Spread: 10-12"

Flower: Pink, white, yellow, red, blue, orange, purple Bloom time: May-July





Western Colur native

A dainty perennial with a spurred, trumpet-shaped flower in multi-colored blooms. Foliage is grayish-green with shamrock-like foliage. Deadhead to encourage prolonged blooming. Partial shade for improved drought tolerance. Short lived but will reseed. Western Columbine (A. formosa) has a red and yellow bloom. Many cultivated varieties available. Attracts hummingbirds.

Coneflower *Echinacea* species



'Cheyenne Spirit'





A perennial herb with large daisy-like flowers that are both single- and double-blooming in various colors. Late-season bloomer. Makes a good cut or dried flower. Dried seed heads can provide food for birds. Several cultivated varieties available; some more adaptable than others.

Height: 2-3' Spread: 1½-2' Flower: Purple, pinkish, white, green,

yellow, orange

Bloom time: July-September



Coral bells Heuchera sanquinea







Attractive foliage that is dark green or other various colors; foliage has scalloped edges. Flower stalks rise up above the foliage and produce delicate blooms. Performs best in light shade. Native and cultivated varieties available. Best with east-facing exposure. Attracts hummingbirds.

Height: 12-20" Spread: 12-15" Flower: Red, white, pink, yellow Bloom time: June-September



Coreopsis or Tickseed Coreopsis species



'Zagreb





Either a short- or long-lived perennial, depending on variety. Produces single and double daisy-like flowers in various colors. Green foliage and wiry stems. Cultivars include 'Moonbeam', 'Sunburst', and 'Zagreb'.

Height: 10-24" Spread: 12-18"
Flower: Golden yellow, light yellow,

pink, red

Bloom time: July-September



Cranesbill Geranium varieties





This plant is known as the perennial geranium. Mounding-type growth habit with green foliage and various colored, saucer-shaped blooms. Varieties such as 'Rozanne' are very showy and everblooming. Some may be deer resistant.

Height: 1-2' Spread: 1-2' Flower: Pinks, white, blues Bloom time: June-July



Crocosmia species

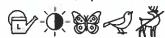




Green sword-like foliage and showy flowers in summer. Attracts hummingbirds. Good for cut flowers.

Height: 2-3' Spread: 1-2' Flower: Scarlet-red, orange, yellow

Bloom time: July



Daylily Hemerocallis species





A very popular perennial that works well in a border or in mass plantings. Long, wide, grass-like green foliage with a mounding type of growth habit. Large lily-shaped flowers bloom for only one day then die and are replaced by new blooms. Better flower presentation with additional moisture. Many cultivars available.

Height: 1-4' Spread: 1-3' Flower: Multiple colors Bloom time: July-August



Delphinium Delphinium varieties



Extremely popular for their tall upright growth habit and beautiful spike flowers in various colors. For use in a border and for cutting flowers.

Height: 1-7'
Spread: 1-3'

Flower: Blues, purples, whites, pinks Bloom time: June-September



Flax, Blue Linum perenne



A native, selfsowing wildflower with delicate leaves and stems. Excellent in mass plantings or meadows. Deadhead to promote longer blooming, prevent

blooming, prevent reseeding, and keep tidy.

Height: 12-20" Spread: 12-14" Flower: Light blue, white Bloom time: May-June



Globe Thistle *Echinops ritro*



A unique, tall perennial that works well in a border. Gray to green, prickly foliage and

attractive globe-shaped flower heads.

Height: 2-3' Spread: 2-3' Flower: Pale purplish-blue Bloom time: July-August



Gayfeather or Blazing Star Liatris species



A tall border perennial with spike-like blooms atop leafy, grass-like foliage. Cultivars include 'Kobold'.

Height: 12–36" Spread: 8–15" Flower: Pinkish-purple Bloom time: July–September





Heartleaf Bergenia Bergenia cordifolia





Large, glossy, green leaves in summer that change to burgundy in fall. Bell-shaped flowers rise up on a spike.

Height: 12-14" Spread: 12-18"

Flower: Pink, white Bloom time: May-June



Lavender Lavandula angustifolia





English lavenders are very adaptable to the high desert. Gray-green foliage with showy, fragrant lavenderblue spikes. French Lavender

(Lavandula intermedia) varieties are often used by large scale growers. Spanish lavender (Lavandula stoechas) is not as hardy. Many cultivars available in different sizes.

Height: 12–24" **Spread:** 24–28" **Flower:** Lavender-blue, white, pink

Bloom time: July-August



Hosta Lily Hosta species





A shade perennial with attractive foliage in various shades of green to blue. A flower stalk

rises up from the leaves with a fragrant, bell-shaped flower. Many cultivars available.

Height: 6-36" Spread: 20-24" Flower: Purple, lavender, or white flowers hang from a spike Bloom time: July-August



Iris, Tall Bearded Iris hybrids



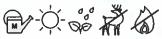


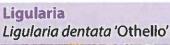


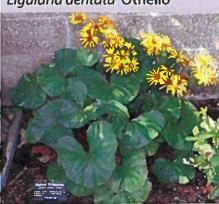
Bluish-green, sword-like leaves. Large, sophisticated flowers in every shade and often bicolor and fragrant. Lift and divide clumps every few (3 to 4) years to keep maintained. Makes a nice cut flower. Requires less water after blooming.

Height: 16–30" Spread: 14–24"

Flower: Multiple colors Bloom time: May-June









Large, robust, dark green leaves emerge in spring followed by tall flower stems with yellow blooms. Good option for shady sites. Several other Ligularia varieties available.

Height: 35-45" Spread: 29-35" Flower: Golden-yellow Bloom time: July-August



Orange Globe Mallow Sphaeralcea munroana





An attractive native plant for Central Oregon. Gray-greenish leaves and showy orange blossoms.

Height: 36-42" Spread: 24"

Flower: Orange Bloom time: May-July



Oregon Sunshine Eriophyllum lanatum





Gray to green leaves covered by soft white hairs make this native plant very drought tolerant. Easy to grow. Daisy-like

flowers. Attracts hummingbirds.

Height: 4-24" Spread: 20-24"

Flower: Yellow

Bloom time: May-July



Pasque Flower Pulsatilla species







A mounded, compact growth habit with feathery leaves, a cup-shaped flower, and silky seed head. Will reseed. Good for use in rock gardens. Can provide early season nectar for honeybees.

Height: 4–8" Spread: 8" Flower: Purple, pink, white Bloom time: April–July



Penstemon or Beardtongue Penstemon species



'Red Rocks'



Height: 4-48" Spread: 6-36"
Flower: Pink, purple, blue, red, white
Bloom time: June-August





'Rocky Mountain'

Excellent perennial for a dry garden. Available in several varieties and flower colors. Great specimen plant. There are large numbers of native and cultivated species. Attracts humming-birds. Some are deer-resistant, but not all.

Penstemon, Pineleaf Penstemon pinifolius



Bright green, needle-like foliage and tubular-shaped flowers. Long-blooming (6 to 8 weeks) perennial. Many cultivated varieties available. Attracts hummingbirds.

Height: 6-12" Spread: 15-24" Flower: Yellow, orange, peach Bloom time: July-September



Phlox, Tall Garden Phlox paniculata varieties





Tall, uprightblooming perennial in various flower colors. Dark green foliage. Flowers are

very fragrant; good for cut flowers. Look for powdery mildew resistant varieties such as 'David' (white).

Height: 24–36" Spread: 12–24" Flower: Multiple colors Bloom time: July–August



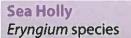
Increasing plant diversity
in the landscape will increase
the diversity of native, beneficial
insects and wildlife, which helps
minimize plant damage from
insects and disease.

Salvia or Sage Salvia sylvestris

Perennial herb with a shrub-like growth habit and grayish-green or multi-colored foliage. Formal, spike-like flowers in various colors. Attracts bees. Deadhead to encourage a second bloom. Some, such as 'East Friesland', will reseed heavily. Cultivars that should not reseed include 'May Night', 'Marcus', 'Blue Hill', and 'Caradonna'. Native Purple Sage (S. dorrii) has a more shrub-like form.

Height: 18-28" Spread: 24-34" Flower: Purple, rose, blue spikes Bloom time: June-September







perennial has
unique flowers
and a silver, spiny
leaf that makes it a
showstopper when

in bloom. Adds unique architecture to the garden. Will send down a deep tap root, becoming more drought tolerant over time. Great for cut and dried flowers. Cultivars include 'Big Blue'.

Height: 24–36" Spread: 24–36" Flower: Iridescent blue Bloom time: June–July



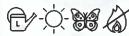
Sedum, Tall Sedum species





Succulent, green foliage that changes to purplish-red fall color. Late-blooming perennial. Small, star-shaped flowers form a large cluster atop stems. Good for cut or dried flowers. Cultivars include 'Autumn Fire' (an improved form of 'Autumn Joy' with sturdier stems).

Height: 18-24" Spread: 18-24" Flower: Rosy-red, white Bloom time: August-September



Siberian Bugloss Brunnera macrophylla





Attractive, silverand-green, heartshaped foliage and dainty blue flowers brighten up a shady spot in the garden. Cultivars include 'Jack Frost'. Can also be used as a groundcover.

Height: 12-18" Spread: 18-30"

Flower: Blue

Bloom time: April-May



Torch Lily or Red-hot poker Kniphofia uvaria





Stiff, bluish-green, tufted grass-like foliage. Unique flower clusters arise on spikes above the foliage. Several sizes and varieties available. Attracts hummingbirds.

Height: 12-48" Spread: 24-36"
Flower: Orange, yellow, white, green, often multicolored
Bloom time: June-August



Yarrow Achillea species





Fern-like foliage in shades of green to gray. Long blooming and very drought tolerant. Makes nice cut or dried flowers. Native variety is

common yarrow (A. millefolium), which blooms white and will spread. Yarrows are fast growing and can spread significantly or reseed, so be sure to plant accordingly. Can be used in mass plantings. Some varieties are used as a turfgrass alternative. Seed-propagated varieties will reseed easily. Cultivars that will not reseed include 'Coronation Gold', 'Moonshine', and 'Red Velvet'.

Height: 6-48" Spread: 12-48" Flower: White, red, yellow, pink Bloom time: May-September



Resources

OSU Extension publications

- Conserving Water in the Garden (EM 9125) https://catalog.extension.oregonstate.edu/em9125
- Keys to Water-efficient Landscapes (EM 9134) https://catalog.extension.oregonstate.edu/em9134
- Landscape Maintenance to Conserve Water (EM 9135) https://catalog.extension.oregonstate.edu/em9135
- It Pays to Water Wisely (EM 9133) https://catalog.extension.oregonstate.edu/em9133
- Efficient Lawn Irrigation in the Intermountain West (EC 1638) https://catalog.extension.oregonstate.edu/ec1638
- Harvesting Rainwater for Use in the Garden (EM9101) https://catalog.extension.oregonstate.edu/em9101

References

- The Oregon Rain Garden Guide: A Step by Step Guide to Landscaping for Clean Water and Healthy Streams http://seagrant.oregonstate.edu/sgpubs/oregon-rain-garden-guide
- Litvak, Elizaveta, Neeta S. Bijoor, and Diane E. Pataki. "Adding trees to irrigated turfgrass lawns may be a water-saving measure in semi-arid environments." *Ecohydrology* 7.5 (2014): 1314-1330.
- Oregon Drainage Law Central Oregon Stormwater Manual https://coic2.org/community-development/water-resources/
 (scroll down to middle of page)
- Turfgrass Maintenance Calendar for Eastern Oregon http://extension.oregonstate.edu/deschutes/sites/default/files/Horticulture/documents/TurfgrassCalendar2.pdf
- City of Bend Water-wise www.water-wisetips.org
- City of Bend Stormwater <u>www.bendoregon.gov/stormwater</u>

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